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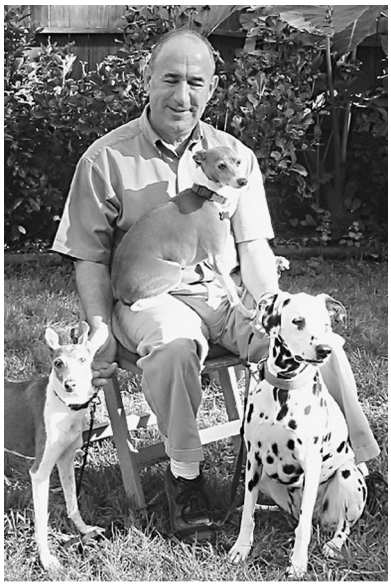
Another Thanks to All *JSR* Supporters

AS EDITOR-IN-CHIEF, I would like to acknowledge all of the important contributors to this journal and thank them. These contributors are the authors, reviewers, Associate Editors (AEs), and AIAA editorial staff who have been associated with the *Journal of Spacecraft and Rockets* (*JSR*). The *JSR* has a diverse scope with application-oriented articles, and I hope that the technical community continues to find the papers to be of interest. I need to thank the authors who have chosen the *JSR* as the means to disseminate their research to the technical aerospace community. I hope that they felt that the peer-review process was professional and constructive. The peer-review process and the high quality of the AIAA journals would not exist if it were not for the reviewers who voluntarily give of their time and provide in-depth reviews. Although it is only a small token of appreciation, their names are listed in this issue. I hope that we have successfully included all of them. I do, however, thank all who gave their time. The Associate Editors provide the cornerstone of this peer-review process. They have the responsibility for the technical evaluation of the proposed papers and for maintaining the high quality in the published version. If anyone has ever had the responsibility of an Associate Editor position, a simple thank you probably seems insufficient. It is very difficult trying to balance your real job with one in which you offer your services to your profession with no question as to "what am I getting out of it?" The biographies of the AEs are included in this issue. I need to thank Ms. Amanda Maguire, whose great help is always greatly appreciated, as well as the support of Ms. Becky Rivard.

E. Vincent Zoby
Editor-in-Chief



E. VINCENT ZOBY is employed by NASA and has been at Langley Research Center (LaRC) since 1962. He received a B.S. in mechanical engineering from Virginia Polytechnic Institute and State University and an M.S. in thermal engineering from Old Dominion University. Mr. Zoby has been responsible for developing and demonstrating the applicability of approximate codes that define the aeroheating environment about spacecraft at both Earth and planetary entry conditions. This work encompassed preliminary design and/or postflight heating calculations for the RAM C, Re-Entry F, and space shuttle, as well as the Pioneer Venus and Galileo probes. (Typically, a comment is usually made at this point about the dogs in the photo. There is Murphy, the Dalmatian, and Enzo and Banks, the two Italian Greyhounds. Sadly, Banks, the larger Greyhound, is no longer with us.) Mr. Zoby has over 90 publications in the area of hypersonic aerothermodynamics to his credit, including studies for computing the equilibrium high-temperature properties of gas mixtures and surface catalytic effects. His recent assignments included the LaRC technical team, Aerothermodynamic Lead for the X-37 vehicle, Peer Evaluator for the HYPERX-X43A return to flight studies, and Member of the NASA Engineering and Safety Center Aerothermodynamics panel for the Return to Flight investigation. He is presently the lead for several U.S. Air Force Research Laboratory programs and is the LaRC Aerothermal Technical Manager for the Crew Exploration Vehicle program. He was the recipient of the NASA Distinguished Service Medal. He is a Fellow of the AIAA. He is also the Editor-in-Chief of the *Journal of Spacecraft and Rockets.*

Associate Editors

GREGORY S. AGNES is the Group Lead for Precision Deployable Structures at the Jet Propulsion Laboratory (JPL). Before coming to JPL, he served 11 years in the U.S. Air Force, achieving the rank of Major. He conducted research at the U.S. Air Force Research Laboratory and taught at the Air Force Institute of Technology. He received his B.S. in aeronautical engineering from Rensselaer Polytechnic Institute, his M.S. in aerospace engineering from the University of Maryland, and his Ph.D. in engineering mechanics from Virginia Polytechnic Institute and State University. His research interests include vibrations, precision structures, nonlinear dynamics, and adaptive structures. Dr. Agnes is an Associate Fellow of the AIAA and serves on the Adaptive Structures Technical Committee.

IAIN D. BOYD received a B.S. in mathematics (1985) and a Ph.D. in aeronautics and astronautics (1988) from the University of Southampton in England. He worked for four years as a contractor at NASA Ames Research Center in the area of rarefied gas dynamics. Dr. Boyd was a faculty member in mechanical and aerospace engineering at Cornell University for six years and recently joined the Department of Aerospace Engineering at the University of Michigan. His research interests involve development of physical models and numerical algorithms using particle methods, with applications to a variety of nonequilibrium gas and plasma dynamic systems. He has authored over 60 journal papers. He is the recipient of the 1998 AIAA Lawrence Sperry Award and the 1997 AIAA Electric Propulsion Best Paper Award.

MARK COSTELLO is the Sikorsky Associate Professor, School of Aerospace Engineering, Georgia Institute of Technology. He received his B.S. in aerospace engineering from Pennsylvania State University (1987) and his M.S. and Ph.D. in aerospace engineering from Georgia Institute of Technology (1989 and 1992). From 1993 to 1997, Prof. Costello served on the faculty of the Department of Civil and Mechanical Engineering at the United States Military Academy at West Point, and from 1998 to 2006, he served on the faculty of the Department of Mechanical Engineering at Oregon State University. He worked as a Research Engineer in the Helicopter Division of The Boeing Company and in the Aerospace Laboratory at Georgia Tech Research Institute. His research group is focused on the development of innovative flight mechanics and control technologies for a variety of flight vehicles, including projectiles, rockets, micro air vehicles, and rotorcraft. He has authored or coauthored over 100 publications. Professor Costello is an Associate Fellow of the AIAA.

RUSSELL M. CUMMINGS graduated from California Polytechnic State University with a B.S. and M.S. in aeronautical engineering in 1977 and 1985, respectively, before receiving his Ph.D. in aerospace engineering from the University of Southern California in 1988. He was recently named Professor of aeronautics at the U.S. Air Force Academy. Before that, he was Professor of aerospace engineering at California Polytechnic State University from 1986 through 2004, where he served as department Chair for four years. He worked for Hughes Aircraft Company in the Missile Systems Group as a Missile Aerodynamicist from 1979 through 1986. He completed a National Research Council postdoctoral research fellowship at NASA Ames Research Center in 1990, working on the computation of high-angle-of-attack flowfields in the Applied Computational Fluids Branch. He was named an Associate Fellow of the AIAA in 1990, received the AIAA National Faculty Advisor Award in 1995, and is the past chairman of the AIAA Student Activities Committee. In addition, he has been awarded the Northrop Grumman Excellence in Teaching and Applied Research, TRW Excellence in Teaching, and Litton Excellence in Research and Development awards. He received a B.A. in music from California Polytechnic State University in 1999.

OLIVIER L. DE WECK is an Associate Professor of aeronautics and astronautics and engineering systems at the Massachusetts Institute of Technology (MIT). He holds degrees in industrial engineering from ETH Zurich (1993) and aerospace systems engineering from MIT (1999 and 2001). Before joining MIT, he was a Liaison Engineer and later Engineering Program Manager on the F/A-18 aircraft program at McDonnell Douglas (1993–1997). His research interests, teaching emphasis, and professional experience are mainly in two areas: systems engineering for changeability and commonality, as well as space logistics. He currently serves as Chair of the AIAA Space Logistics Technical Committee. Professor de Weck is an Associate Fellow of the AIAA, winner of the 2007 Best Paper Award from the journal *Systems Engineering* and the 2006 Frank E. Perkins Award for Excellence in Graduate Advising, and recipient of the 2007 AIAA Multidisciplinary Design Optimization Technical Committee Outstanding Service Award. His research has been funded by General Motors, NASA, BP, Jet Propulsion Laboratory, ArvinMeritor, the Defense Advanced Research Projects Agency, and the Alfred P. Sloan Foundation. He served as the General Chair for the 2nd AIAA Multidisciplinary Design Optimization Specialist Conference in May 2006.

DAVID L. EDWARDS has served as the Branch Chief of the Natural Environments Branch in the Engineering Directorate at NASA Marshall Space Flight Center (MSFC) since December 2005. Dr. Edwards started his career as an Engineer in May of 1989 with the Environmental Effects Branch in the Materials and Processes Laboratory. During his career, he has served in a variety of positions, including Team Lead of the Space Environments Effects Team, Branch Chief of the Environmental Effects Branch, and MSFC Coresident Manager at the Jet Propulsion Laboratory for the Jupiter Icy Moons Orbiter Program. Dr. Edwards received his B.S. from the University of North Alabama in physics in 1985, M.S. from Auburn University in physics in 1989, and Ph.D. in materials engineering from Auburn University in 1999. Dr. Edwards has served as Associate Editor for *JSR* for seven years.

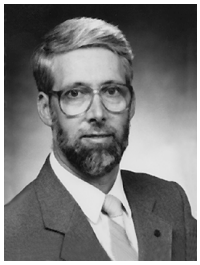
ANDREW D. KETSDEVER is currently a Group Leader and Senior Research Engineer at the U.S. Air Force Research Laboratory's (AFRL) Propulsion Directorate at Edwards Air Force Base. He has worked in the areas of nonequilibrium flows, rarefied gas dynamics, microfluidics, spacecraft–thruster interactions, and microspacecraft propulsion since starting at AFRL in 1992. Dr. Ketsdever received a Ph.D. in aerospace engineering from the University of Southern California (USC) in 1995, where he is currently a Research Professor in the Department of Aerospace and Mechanical Engineering. He regularly teaches graduate and undergraduate courses in rarefied gas dynamics, planetary atmospheres, microspacecraft design, and spacecraft–environment interactions, and he is the Director of the USC Student Microsatellite Program. He has been a Member of the AIAA Thermophysics Technical Committee, has been involved with the AIAA Fluid Dynamics Technical Committee's Working Group in Microfluidics, has authored or coauthored over 50 technical papers, and has coedited an AIAA Progress in Astronautics and Aeronautics series book titled *Micropropulsion for Small Spacecraft*.

ROGER L. KIMMEL is a Principal Aerospace Engineer in the U.S. Air Force Research Laboratory Air Vehicles Directorate. He received his B.S. from Pennsylvania State University in 1982 and his Ph.D. from Princeton University in 1987. He was employed by the Hughes Aircraft Company Missile Systems Group before his employment with the U.S. Air Force. In addition to being Principal Investigator for boundary-layer transition on the HIFiRE program, he coordinates wind-tunnel testing for several programs on hypersonic vehicles. His professional interests include boundary-layer transition, shock boundary-layer interactions, and plasmadynamics. He is an American Society of Mechanical Engineers Fellow and Associate Fellow of the AIAA.

CRAIG A. KLUEVER is the C.W. LaPierre Professor of mechanical and aerospace engineering at the University of Missouri–Columbia. He received his B.S. in aerospace engineering from Iowa State University in 1986 and worked at Rockwell International from 1986 to 1989 in the Space Shuttle Guidance, Navigation, and Control Group. He returned to Iowa State and completed his M.S. and Ph.D. degrees in aerospace engineering in 1990 and 1993, respectively. His research interests include mission design and analysis, trajectory optimization, guidance and control of aerospace vehicles, reentry flight mechanics, and orbital mechanics. An Associate Fellow of the AIAA, he has served on its Astrodynamics and Atmospheric Flight Mechanics Technical Committees.

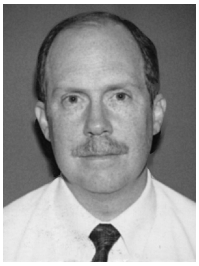
TONY C. LIN received his B.S. in civil engineering from National Taiwan University (1964) and his Ph.D. in aerospace engineering from Polytechnic Institute of Brooklyn (1969). Over the years, he has worked at NASA Marshall Space Flight Center, Avco, and The Aerospace Corp. Since 1979, he has been with TRW/SSD and is currently a Department Manager. His primary fields of interest are aerothermodynamics, flight mechanics, computational fluid dynamics, and electromagnetic wave propagation.

BELINDA G. MARCHAND specializes in the application of dynamic systems theory, optimization, and nonlinear control methods. Her undergraduate and graduate degrees were bestowed at the Purdue University School of Aeronautics and Astronautics. She obtained a B.S. in aeronautical and astronautical engineering in 1997 and an M.S. in aeronautics and astronautics in 2000, and she completed her Ph.D. dissertation in 2004. Dr. Marchand is currently an Assistant Professor at the University of Texas at Austin in the Department of Aerospace Engineering and Engineering Mechanics. Her research activities have encompassed many subjects, including the application of a dynamic systems approach to the study of solar system transport dynamics and the generalized n-body problem, spacecraft mission design, formation-flight dynamics and control, optimal control in dynamically uncertain systems, and subsystems modeling in support of the robotic lunar exploration program. In the past, Dr. Marchand has collaborated with the Jet Propulsion Laboratory and NASA Goddard Space Flight Center and provided analyses in support of missions such as Genesis and formation-flight concepts such as MAXIM, Stellar Imager, and Constellation X. Additional professional affiliations include The Boeing Company and, more recently, the Applied Physics Laboratory.



JAMES A. MARTIN holds a B.S. from West Virginia University, an M.S. and engineering degrees from the Massachusetts Institute of Technology, and a D.Sc. from George Washington University. He has worked at the NASA Langley Research Center, the University of Alabama, and The Boeing Company. His work has mostly involved the design and evaluation of reusable launch vehicles and space transfer concepts. Several of his papers deal with tripropellant rocket propulsion options. He was leader of the Orbit-on-Demand Study at NASA. Some of his recent work has been on the NASA and Boeing Solar Power Satellite Program, crew escape for the shuttle, and the use of tethers for launch and orbit transfer.

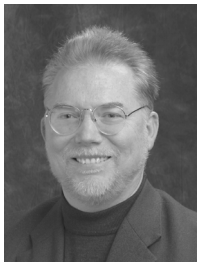
CRAIG A. MCLAUGHLIN is Assistant Professor of aerospace engineering at the University of Kansas. He received his B.S. in aeronautical engineering from Wichita State University and his M.S. and Ph.D. in aerospace engineering sciences from the University of Colorado at Boulder. His research interests are in astrodynamics, with emphasis on orbit determination and prediction, upper atmospheric density, and spacecraft formation flying. Dr. McLaughlin was previously in the Space Studies Department at the University of North Dakota and at the U.S. Air Force Research Laboratory, Space Vehicles Directorate. He has served on the AIAA Astrodynamics Technical Committee since 2000.



MARK S. MILLER received his B.S. and M.S. in aerospace engineering from Auburn University and is an Associate Fellow of the AIAA. His areas of technical expertise include missile aerodynamic design, wind-tunnel testing, and performance analysis. He is currently Manager of the Missile Systems Department at Dynetics, Inc., where he directs a group of engineers supporting a variety of missile-related projects for the U.S. Department of Defense. He has also been the Principal Investigator on several Small Business Innovative Research contracts, evaluating advanced aerodynamic control technologies for a variety of atmospheric vehicles. Mr. Miller has been a Member of both the AIAA Atmospheric Flight Mechanics and the Applied Aerodynamics Technical Committees, was the Technical Chair of the 1996 AIAA Applied Aerodynamics Conference, and has served as a coinstructor for the AIAA Short Course on Launch Vehicle and Missile Aerodynamics, first taught in 2000.

JOSEPH I. MINOW graduated from Western State College (1981) with a B.A. in biology/chemistry, then decided to pursue a space physics career, completing his M.S. in physics at the University of Denver (1987) and his Ph.D. in physics from the University of Alaska Fairbanks (UAF) in 1997. His doctoral research at UAF's Geophysical Institute focused on solar–terrestrial interactions and magnetospheric physics. Dr. Minow held a Postdoctoral Fellowship at Embry-Riddle Aeronautical University (1997–1998), where he conducted research on airflow and auroral phenomena at polar latitudes. He joined the Natural Environments Branch at NASA's Marshall Space Flight Center (MSFC) in 1998 as a Senior Engineer with Sverdrup Technology (now Jacobs Engineering) and served as Sverdrup's Environments Group Supervisor (1999–2004). In 2004, he was hired by NASA/MSFC to lead the ionizing radiation and space plasma environment work for the Natural Environments Branch and to provide spacecraft–space-environment-interaction support to NASA programs, including the International Space Station, the shuttle, Chandra, expendable launch vehicles, and the new Constellation Program. Dr. Minow's professional activities include characterizing and modeling space radiation and plasma environments using data from research or operational spacecraft and evaluating their effects on space systems. Space environment analyses and engineering models developed by the branch are used by NASA for defining program requirements, characterizing relevant test environments, guiding spacecraft design, operations support for space systems, and resolution of on-orbit anomalies. Dr. Minow is the author or coauthor of over 60 publications and conference presentations and serves on the AIAA Atmospheric and Space Environments Technical Committee (since 2001).

GRANT PALMER is a Senior Research Scientist with the Eloret Corporation and supports the Reacting Flow Environments Branch at NASA Ames Research Center. He received his B.S. in mechanical engineering from University of California, Berkeley, and a M.S. in aeronautical engineering from Stanford University. He worked at NASA Ames as a civil servant for 15 years and has been with Eloret for the past 8 years. He has authored or coauthored 55 technical papers in the fields of computational fluid dynamics, thermal protection system design, and transport property modeling. Mr. Palmer has also written six books on the Java and C# computer programming languages.



LEE D. PETERSON is Associate Professor of aerospace engineering sciences at the University of Colorado. He has been an Associate Professor or Assistant Professor at the University of Colorado since 1991. Dr. Peterson is also Director of the McDonnell Douglas Aerospace Structural Dynamics and Control Laboratory and is a Member of the Center for Aerospace Structures (CAS). From 1989 to 1991, Dr. Peterson was Assistant Professor of aeronautics and astronautics at Purdue University. Before his work at Purdue, Dr. Peterson was a member of the technical staff at Sandia National Laboratories. He obtained his S.B. (1982), S.M. (1983), and Ph.D. (1987) in aeronautics and astronautics from the Massachusetts Institute of Technology. He has authored or coauthored more than 100 publications in the areas of space structure mechanics, dynamics, control, and design. His research interests are in the development of large, lightweight, precision space structures for optical telescopes and interferometers. This includes experimental and theoretical research in the stability of structures and structural components at nanometer scales of deformation.

DAVID B. SPENCER is an Associate Professor of aerospace engineering at Pennsylvania State University. He teaches undergraduate and graduate courses in spacecraft dynamics and controls. Additionally, he conducts research in the areas of space systems design and engineering, trajectory optimization, guidance, navigation, control, and theoretical and applied astrodynamics. Formerly, he was a member of the technical staff at The Aerospace Corporation and held various technical and management positions at the U.S. Air Force Research Laboratory's Space Vehicles Directorate. He has a B.S. in mechanical engineering from the University of Kentucky, an M.S. in aeronautics and astronautics from Purdue University, and a Ph.D. in aerospace engineering sciences from the University of Colorado at Boulder. Dr. Spencer is an Associate Fellow in AIAA, the author of several technical publications, and Vice President of Publications for the American Astronautical Society. He also serves on the AIAA Astrodynamics Technical Committee.

KATHRYN E. WURSTER is a Senior Research Engineer in the Vehicle Analysis Branch at NASA Langley Research Center, where she has been employed for approximately 30 years, since receiving her degrees from Rensselaer Polytechnic Institute. Ms. Wurster has an extensive background in engineering methods for aerothermodynamic predictions and thermal analysis and serves as the U.S. Government's point of contact for the MINIVER code, a suite of aerothermodynamic and thermal protection system (TPS) analysis and design tools used throughout the industry. She is responsible for the continued development and validation of the code's prediction methods, using computational fluid dynamics and experimental data, and she is also responsible for the enhancements necessary to accommodate increasingly complex advanced space transportation configurations and materials technologies. Her early work focused on methods development for the tailoring of entry trajectories for reusable launch vehicles, subject to aeroheating and TPS requirements, including turbulent heating constraints. She has provided the transient heating environment basis for TPS design for numerous conceptual and test demonstrator programs, including the HL-20 personnel launch system, Access to Space winged-body concept, X33 lifting body, and X34. Ms. Wurster's current focus is the integration of computational, experimental, and engineering methods for the prediction of the transient aeroheating environments required for TPS analysis and design. She has served on numerous peer-review panels, including the NASA Engineering and Safety Center evaluation of the damage assessment tools for the shuttle return-to-flight and the X43A return-to-flight peer-assessor teams. Most recently, her work has concentrated on the development of engineering methods for aeroheating environment prediction for ballistic return vehicles such as NASA's Crew Exploration Vehicle, as well as several deployable heat-shield concepts for unmanned return vehicles.